Table 2

	polymer	monomer	copying
9	polymer 1	ethylene glycol dimethacrylate	good
10	polymer 2	ethylene glycol dimethacrylate	good
11	polymer 3	triethylene glycol dimethacrylate	good
12	polymer 3	1,3-butanediol dimethacrylate	good
13	polymer 3	1,6-hexanediol dimethacrylate	good
14	polymer 3	neopentyl glycol dimethacrylate	good
15	polymer 3	tetraethylene glycol diacrylate	good
16	polymer 3	nonaethylene glycol diacrylate	good
17	polymer 3	1,6-hexanediol diacrylate	good
18	polymer 3	neopentyl glycol diacrylate	good
19	polymer 3	Trimethylolpropane trimethacrylate	good
20	polymer 3	Trimethylolpropane triacrylate	good
21	polymer 3	Tetramethylolmethane tetraacrylate	good
22	polymer 3	Dipentaerythritol hexaacrylate	good
23	polymer 3	9,9-bis(4-(2-acryloyloxyethoxy)phenyl)fluorene	good

polymer 1: diallylorthophthalate prepolymer (Daiso DAP, Type K)

polymer 2: diallylisophthalate prepolymer (ISODAP)

polymer 3: diallylorthophthalate prepolymer (Daiso DAP, Type A)

EXAMPLES 27 TO 36

(1) 2 g of diallylorthophthalate prepolymer ("Daiso DAP Type A" produced by Daiso Co., Ltd.), 3 g of a (meth)acrylate monomer shown in Table 3, 0.25 g of benzil, 0.085 g of Michler's ketone, and 3.5g of acetone were mixed at an ordinary temperature to prepare recording material compositions comprising these components.

(2) The compositions were coated on one surface of a glass plate substrate having a dimension of 60 x 60 x 1.3 mm in an appropriate amount, and acetone was removed from the coated layer under reduced pressure, to produce recording materials having a two-layer structure comprising the substrate and the recording layer.

(3) A PET film in a strip form having a size of 1 x 60 mm and a thickness of 20 μm was placed on the recording layer, and a protective material comprising a glass plate having the same size as the substrate was placed thereon, to produce three-layer photosensitive plates having a sandwich form for recording a hologram.

(4) Interference was formed between object light and reference light by using a He-Cd laser. The three-layer photosensitive plate for recording a hologram was placed at a position, at which a fringe pattern formed by the interference could be caught. The photosensitive plate was exposed to He-Cd laser light (2.5 mW/cm^2) for a prescribed period of time under the conditions, and an interference fringe to be a hologram could be recorded on the photosensitive plate.

The recording material compositions obtained in Examples 27 to 36 and results of measurement of diffraction efficiency conducted by using

them are shown in Table 3.

Evaluation of performance

The diffraction efficiency of each transmission type hologram obtained in the above-mentioned Examples 27-36 was calculated by determining a ratio of diffracted light to incident light with a light power meter (OPTICAL POWER/ENERGYMETER, MODEL 66XLA produced by PHOTODYNE Co., Ltd.) by the following equation.

Diffraction efficiency (%) = (diffracted light intensity／incident light intensity)×100